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ABSTRACT

The employment status of 1980 degree recipients in physics and astronomy was surveyed. For physics degree recipients, the majority of bachelors and masters required two months or less to accept suitable employment, while the majority of doctoral graduates required three months or longer. Information is presented on changes in occupational status of physics and astronomy degree recipients between the summer of 1980 and the following winter. The characteristics of graduates who were employed full-time or undertaking temporary postdoctoral fellowships are compared in relation to: sex, age, citizenship, type of research, and major subfields. The proportions of women and foreign degree recipients increased in both the physics and astronomy professions, and fewer doctoral physicists changed subfield as they accepted potentially permanent positions. A listing of the major subfields of the physics dissertations shows that for subfields like plasma or optics a very high proportion of graduates secure potentially permanent positions. The length of postdoctoral fellowships for 1980 degree recipients is considered in relation to citizenship, selected subfields, and postdoctoral plan. Data on employers of new doctoral physicists show that industry accounts for half of the positions accepted; specific work activities of these physicists are indicated. Data on masters-level physicists show that: the type of institution attended is influential in determining initial employment; and four out of five new masters start employment in physics-related positions. Almost 80 percent of masters and bachelors physicists found their initial employment challenging. An estimated 70 out of 165 astronomy bachelors were interested in immediate employment rather than pursuing a career in astronomy; of the 24 respondents, 11 found astronomy-related work. (SW)

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AIP report

MANPOWER STATISTICS DIVISION

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# EMPLOYMENT SURVEY 1980

by Susanne D. Ellis

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To assess the employment opportunities for new physicists as accurately as possible it is necessary to allow a reasonable period of time for the degree recepients to explore the job market and start their careers. Since the largest number of degrees are granted in May and June of each year, by conducting the Employment Survey in December, we allow the employment-oriented graduates a minimum of six months to select and get involved in their employment.

Each respondent to this survey is a graduate who was granted a physics degree between July 1979 and June 1980, and who indicated in one of two surveys during the summer of 1980 that he or she is interested in employment. Naturally, many of the graduates among the summer respondents had already started their employment. But those 12%, 10% and 4% of the new physics bachelors, masters, and doctors respectively who had been uncommitted in the summer of 1980 were now in a position to evaluate their employment choices.

Highlights of this report are:

1) The majority of doctoral physicists takes three months or longer to accept potentially permanent positions.
2) Both physicists and astronomers increased their proportions of women and foreign degree recipients.
3) Fewer doctoral physicists changed subfields as they accepted potentially permanent positions.

**Figure I** addresses itself to the question of how long does it take a graduate to secure initial employment which he or she can classify as potentially permanent; for that reason 'postdocs' are excluded from **Figure I** as noted in its key. The general conclusion one can draw from this figure is that the majority of bachelors and masters requires two months or less to accept suitable employment while the majority of doctoral graduates takes three months or longer before accepting potentially permanent positions. To be more specific, it is 71% of the bachelors, 64% of the masters and 46% of the doctors who reported spending two months or less to secure employment. Those three percentages show little change from the previous year. However, by distinguishing between taking one to two months, or less than one month, we find a significant change for the bachelors and masters from what they reported in the previous year. The notation "<1 month" in **Figure I** describes those degree recipients

**Fig. I. Time spent by 1979-80 physics degree recipients in securing employment**

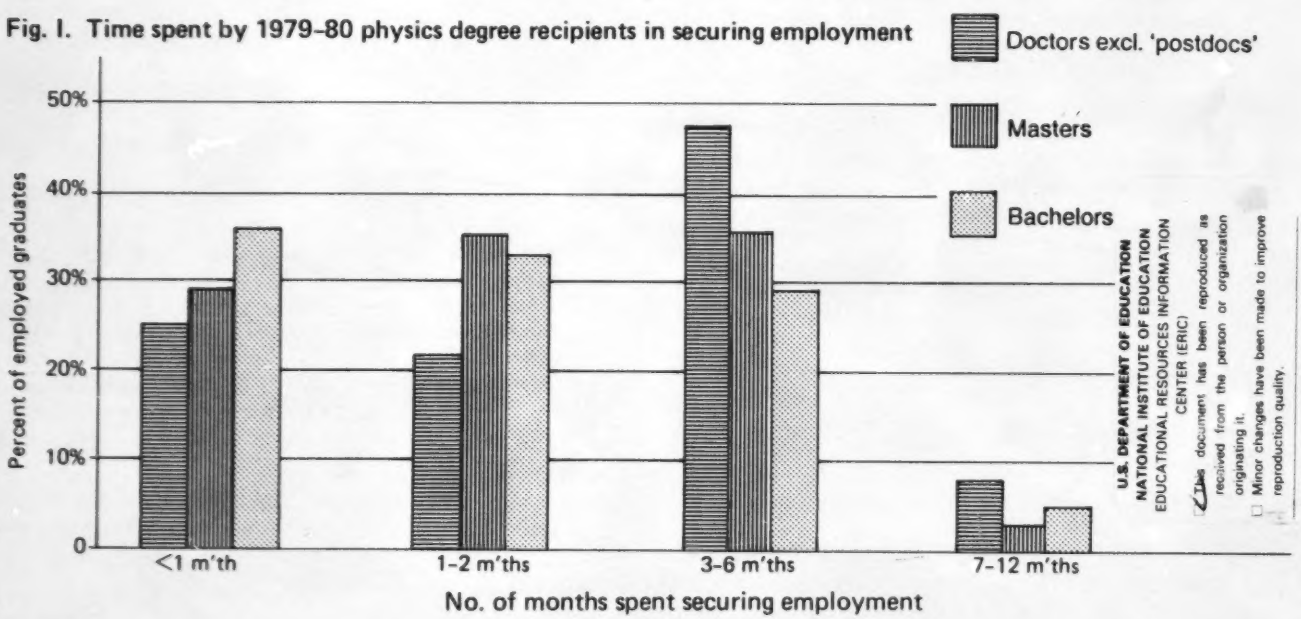


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**Table I. Changes in occupational status of physics degree recipients between the summer of 1980 and the following winter.**

Employment status reported by physics degree recipients, summer 1980

| Doctors | | Occupational status, winter 1980–81: 'Postdoc' or student | Full-time employed | Employed p-t, temp., other | Not empl. and seeking | Total N | Total % |
|---|---|---|---|---|---|---|---|
| Newly accepted empl. | | 14 | 138 | - | - | 152 | 41 |
| Continuing employment | | 2 | 30 | - | - | 32 | 9 |
| 'Postdoc' | | 126 | 25 | - | - | 151 | 41 |
| Other | | 6 | 11 | - | - | 17 | 5 |
| Not empl. and seeking | | 2 | 11 | - | 2 | 15 | 4 |
| Total respondents | N | 150 | 215 | - | 2 | 367 | |
| | % | 41 | 59 | - | <1 | | 100% |
| **Masters** | | | | | | | |
| Newly accepted empl. | | 2 | 91 | 2 | 1 | 96 | 59 |
| Continuing employment | | 1 | 24 | 4 | 5 | 34 | 21 |
| Career military | | - | 11 | - | - | 11 | 7 |
| Other | | 1 | 3 | - | - | 4 | 2 |
| Not empl. and seeking | | - | 11 | 4 | 3 | 18 | 11 |
| Total respondents | N | 4 | 140 | 10 | 9 | 163 | |
| | % | 2 | 86 | 6 | 6 | | 100% |
| **Bachelors** | | | | | | | |
| Newly accepted empl. | | 4 | 423 | 6 | 5 | 438 | 57 |
| Continuing employment | | - | 92 | 3 | 1 | 96 | 13 |
| Military service | | - | 74 | 3 | - | 77 | 10 |
| Other (vol., temp.) | | 5 | 3 | 4 | - | 12 | 2 |
| Will be seeking empl. | | 4 | 18 | 9 | 9 | 40 | 5 |
| Not empl. and seeking | | 3 | 68 | 16 | 13 | 100 | 13 |
| Total respondents | N | 16 | 678 | 41 | 28 | 763 | |
| | % | 2 | 89 | 5 | 4 | | 100% |

who have positions lined-up at the time of graduation; the proportions of bachelors and masters in that category declined by 20% and 10% respectively. Our interpretation of this change, based on the graduates' comments, is that non-doctoral graduates felt more relaxed about their employment opportunities and preferred to wait until after graduation before concentrating on the task of securing a position.

As a follow-up survey, the Employment Survey measures changes in occupational status over the six month period from the summer of 1980 to the winter of 1980–81; **Tables I** and **II** highlight these changes for new physics and astronomy graduates respectively. Of major interest is always the change in occupational status of the uncommitted graduates; thus **Table I** shows how 4%, 11% and 13%, depicting the groups of physics doctors, masters and bachelors who were not employed and seeking employment in the summer of 1980, declined to <1%, 6% and 4% respectively when contacted six months later. The total number of astronomy respondents at all three levels was only 105 among whom 4 doctors, 3 masters and 8 bachelors were unemployed in the summer of 1980. By the following winter only 3 of those 15 graduates were still seeking employment, but 2 doctors and one bachelor, previously employed, were in between jobs in the winter of 1980–81 yielding a total of 6 unemployed.

**Table III** singles out the doctoral physicists and astronomers to determine whether any of five major characteristics was influential in the type of employment they accepted; namely temporary postdoctoral fellowships or potentially permanent employment. For both physicists and astronomers it appears that theoreticians are more likely to be offered 'postdocs' than permanent positions, and a higher proportion of the younger doctorate recipients accepted 'postdocs' rather than permanent positions. The subfield chosen for the dissertation does not appear as influential in determining the type of employment for the 1980 graduates as it did in the previous year when far fewer high energy and nuclear physicists were offered permanent employment than 'postdocs'. Plasma physicists merely increased the proportions in which they accepted permanent positions. For astronomers the situation is different because the majority (60%) of doctoral graduates accept 'postdocs', especially those whose dissertation subfields were stellar atmospheres and spectra, or cosmology.

Both physicists and astronomers raised their proportion of women and foreign degree recipients; more women physicists were offered permanent employment than 'postdocs'.

**Table II. Changes in occupational status of astronomy degree recipients between the summer of 1980 and the following winter.**

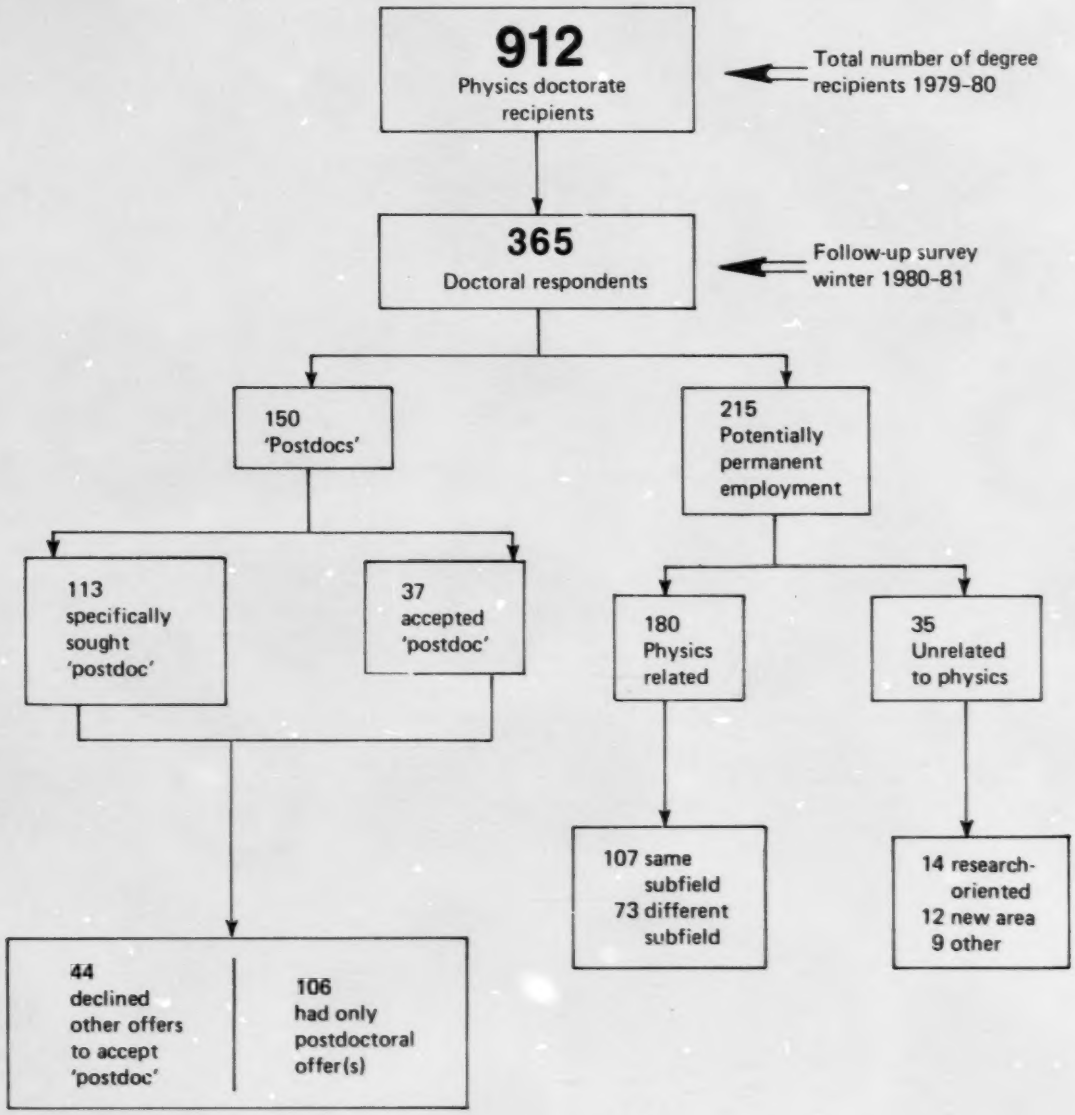
Employment status reported by astronomy degree recipients, summer 1980

| Doctors | | 'Postdoc' or student | Full-time employed | Not employed and seeking | Total N | Total % |
|---|---|---|---|---|---|---|
| Newly accepted empl. | | 3 | 8 | - | 11 | 18 |
| Continuing employment | | 3 | 5 | 1 | 9 | 15 |
| 'Postdoc' | | 29 | 8 | 1 | 38 | 61 |
| Not empl. and seeking | | 1 | 3 | - | 4 | 6 |
| Total respondents | N | 36 | 24 | 2 | 62 | |
| | % | 58 | 39 | 3 | | 100% |
| **Masters** | | | | | | |
| Newly accepted empl. | | - | 7 | - | 7 | 50 |
| Cont., incl. military | | 2 | 2 | - | 4 | 29 |
| Not empl. and seeking | | - | 2 | 1 | 3 | 21 |
| Total respondents | N | 2 | 11 | 1 | 14 | |
| | % | 14 | 79 | 7 | - | 100% |
| **Bachelors** | | | | | | |
| Newly accepted empl. | | 1 | 12 | 1 | 14 | 46 |
| Cont., incl. military | | 1 | 4 | - | 5 | 17 |
| Temporary empl. | | 1 | 2 | - | 3 | 10 |
| Not empl. and seeking | | 1 | 5 | 2 | 8 | 27 |
| Total respondents | N | 4 | 23 | 3 | 30 | |
| | % | 13 | 77 | 10 | | 100% |

**Table III. Characteristics of postdoctoral and full-time employed physics and astronomy doctorate recipients, 1979–80.**

| Characteristics | Physics 'Postdocs' | Physics Full-time employed | Astronomy 'Postdocs' | Astronomy Full-time employed | Characteristics |
|---|---|---|---|---|---|
| **Sex** | | | | | **Sex** |
| Female | 5% | 7% | 14% | 25% | Female |
| Male | 95 | 93 | 86 | 75 | Male |
| **Age** | | | | | **Age** |
| 26 or younger | 9% | 8% | 6% | - | 26 or younger |
| 27 yrs. | 18 | 10 | 14 | 12% | 27 yrs. |
| 28 yrs. | 26 | 19 | 30 | 13 | 28 yrs. |
| 29 yrs. | 18 | 13 | 17 | 17 | 29 yrs. |
| 30 yrs. | 7 | 9 | 14 | 8 | 30 yrs. |
| 31–32 yrs. | 11 | 16 | 14 | 21 | 31–32 yrs. |
| 33 or older | 11 | 25 | 5 | 29 | 33 or older |
| **Citizenship** | | | | | **Citizenship** |
| U.S. | 74% | 83% | 87% | 83% | U.S. |
| Foreign | 26 | 17 | 13 | 17 | Foreign |
| **Type of research** | | | | | **Type of research** |
| Experimental | 52% | 56% | 39% | 58% | Observational |
| Theoretical | 38 | 25 | 33 | 17 | Theoretical |
| Both | 10 | 19 | 28 | 25 | Both |
| **Major subfields** | | | | | **Major subfields** |
| Astrophysics | 4% | 4% | - | 8% | Astronomical instruments and techniques |
| Electron, atomic & molec. | 7 | 6 | 11% | 13 | Astrophysics |
| Elem. particles | 17 | 13 | 17 | 13 | Cosmology, extragalactic, quasi-stellar objects |
| Math. physics | 7 | 4 | 14 | 13 | Interstellar matter and gaseous nebulae |
| Nuclear | 14 | 12 | - | 4 | Solar system, space astronomy of the solar system |
| Plasma | 4 | 11 | 45 | 25 | Stellar atmospheres and spectra, stellar evolution, solar and stellar interiors |
| Solid state | 32 | 30 | | | |
| | | | 13 | 24 | Other |
| Number of respondents | 150 | 215 | 36 | 24 | |

Fig. II. Employment status of 1979-80 doctoral physicists 6-18 months after graduation.




After having distinguished between doctoral physicists who accepted 'postdocs' and those who chose potentially permanent initial employment, we asked each group a different set of questions. For example, postdoctoral fellowships are temporary and low-paying but to many graduates they offer an opportunity to continue the research of their dissertations. Thus it may be of interest to know how many physicists specifically sought those fellowships and even declined other offers to accept them. On the other hand, appropriate questions for physicists who had accepted permanent positions, concern the type of work and the prospect of having to change subfields. **Figure II** summarizes the response from both groups. The 107 degree recipients in the "same subfield" represent a notable increase from the previous year.

**Table IV. Subfield mobility of doctoral level physicists, 1979-80.**

| Major subfields of dissertation | 'Postdocs' | | Graduates with potentially permanent positions | |
|---|---|---|---|---|
| | Number responding | % of respondents holding 'postdocs' in same subfield | Number responding | % of respondents employed in same subfield |
| Astrophysics | 6 | 83% | * | * |
| Elem. particles | 25 | 92 | 19 | 42% |
| Electron, atomic & molec. | 11 | 82 | 8 | 38 |
| Nuclear | 21 | 95 | 20 | 35 |
| Optics | * | * | 9 | 89 |
| Plasma | 6 | 83 | 24 | 87 |
| Solid state | 48 | 92 | 58 | 64 |
| Cross disciplinary | * | * | 11 | 73 |
| All subfields combined | 146 | 80% | 107 | 50% |

*Too few respondents

But exactly which subfields are in demand when examining permanent employment, is shown in **Table IV**. This table lists major subfields of the dissertations and shows that for subfields like plasma or optics a very high proportion of graduates secure potentially permanent positions.

Since the late 1970's postdoctoral fellowships appear to be offered for longer periods of time, perhaps because there are fewer graduates to take them. **Table V** relates the lengths of physics fellowships to three characteristics of their recipients.

Citizenship is the first characteristic listed and it is evident from the distribution shown in the table that a higher proportion of foreign degree recipients was offered shorter 'postdocs'. Subfields seem to have little influence on the lengths of fellowships with the possible exception of elementary particles, 20% of whose graduates get the longer three-year 'postdocs'. And of those 113 new physicists who specifically sought 'postdocs' one third accepted fellowships of at most one year's duration.

**Table V. Factors influencing the length of postdoctoral fellowships for 1979-80 doctoral level physicists.**

| Characteristics | | Length of 'postdoc' 1 yr. | 1.5 to 2 yrs. | >2 yrs. | Total % | Total N |
|---|---|---|---|---|---|---|
| Citizenship | U.S. | 35% | 55% | 10% | 100% | 111 |
| | Foreign | 43 | 46 | 11 | 100 | 39 |
| Selected subfields of PhD | Electron, atomic & molec. | 14% | 72% | 14 | 100% | 7 |
| | Elem. particles | 28 | 52 | 20 | 100 | 25 |
| | Nuclear physics | 56 | 39 | 5 | 100 | 18 |
| | Plasma physics | 67 | 33 | - | 100 | 6 |
| | Solid state | 30 | 68 | 2 | 100 | 43 |
| Plan | Specifically sought 'postdoc' yes | 32% | 56% | 12% | 100% | 113 |
| | no | 50 | 50 | - | 100 | 37 |
| Total respondents | N | 52 | 85 | 13 | | 150 |
| | % | 35 | 57 | 8 | 100% | |

**Table VI. Employment with potential permanence accepted by 1979–80 doctorate recipients.**

| | | Univ. | 4-yr. coll. | Industry | Gov't | FFRC | Other | N | % |
|---|---|---|---|---|---|---|---|---|---|
| Subfield of PhD | Cross disciplinary | 5 | - | 8 | 3 | - | 1 | 17 | 8% |
| | Electron, atomic, molecular | 2 | - | 9 | - | - | - | 11 | 5 |
| | Elementary particles | 8 | 2 | 12 | - | 4 | 1 | 27 | 13 |
| | Nuclear | 6 | 1 | 13 | 2 | 2 | - | 24 | 11 |
| | Optics | - | - | 7 | 1 | 2 | - | 10 | 5 |
| | Plasma | 3 | - | 7 | 3 | 10 | 1 | 24 | 11 |
| | Solid state | 9 | 2 | 40 | 9 | 4 | 3 | 67 | 31 |
| | Other | 10 | 2 | 12 | 7 | 1 | 3 | 35 | 16 |
| Work activity | Teaching | 7 | 5 | - | - | - | - | 12 | 6% |
| | Research | 19 | - | 20 | 13 | 12 | 1 | 65 | 30 |
| | Teaching & research | 15 | 2 | - | - | 1 | - | 18 | 8 |
| | Res./development/design | 1 | - | 71 | 12 | 9 | 4 | 97 | 45 |
| | Computer science | 1 | - | 10 | - | - | - | 11 | 5 |
| | Other | - | - | 7 | - | 1 | 4 | 12 | 6 |
| Physics related work | Same subfield | 34 | 2 | 36 | 16 | 16 | 3 | 107 | 50% |
| | Different subfield | 9 | 3 | 44 | 8 | 7 | 2 | 73 | 34 |
| Unrelated to physics | Research-oriented | - | - | 13 | - | - | 1 | 14 | 6 |
| | New area | - | 1 | 10 | - | - | 1 | 12 | 6 |
| | Other | - | 1 | 5 | 1 | - | 2 | 9 | 4 |
| Total respondents | N | 43 | 7 | 108 | 25 | 23 | 9 | 215 | |
| | % | 20 | 3 | 50 | 12 | 11 | 4 | | 100% |

The employment of new doctoral physicists, who chose potentially permanent positions, is presented in **Table VI**; as expected, industry accounts for half of the positions accepted. Pure research positions, as distinct from those involving research and development, were reported by 30% of the physicists and that employment was almost equally divided among universities, industry and the government. Academic faculty positions again make up one-quarter of the offers that carry potential permanence and include very few straight teaching positions at 4-year colleges. The proportion of high energy physicists among those who accepted permanent positions had doubled in the last year as university demand expanded.

While acknowledging that the number of women and foreign physics masters is small, the members of neither group were among those who were still unemployed and seeking when this follow-up survey was conducted. Among the characteristics listed in **Tables VII** and **VIII** the type of institution attended appears to be more influential in determining one's initial employment than any of the other characteristics shown. Examining the data we find that graduates from the master's institutions find employment in a shorter time than those from the PhD-institutions, but are a little less likely to secure full-time permanent work.

Another aspect one might consider is whether or not a position is physics-related. Although four out of five new masters start employment in physics-related positions, it takes somewhat longer to secure such positions than those that make less use of a master's physics training, according to **Table VIII**. Of the 21 masters who teach, most of them do so at the college level.

**Table VII. Background characteristics and employment status of 1979–80 masters.**

| Characteristics | | Employment full-time | Employment part-time temp., other | Unemployed and seeking | | N | % |
|---|---|---|---|---|---|---|---|
| Sex | Female | 70% | 30% | - | 100% | 15 | 9% |
| | Male | 87 | 7 | 6% | 100 | 148 | 91 |
| Citizenship | U.S. | 89% | 5% | 6% | 100% | 149 | 91% |
| | Foreign | 50 | 50 | - | 100 | 14 | 9 |
| Age | 23 or younger | 100% | - | - | 100% | 7 | 4% |
| | 24 yrs. | 93 | - | 7% | 100 | 29 | 18 |
| | 25 yrs. | 80 | 13% | 7 | 100 | 36 | 22 |
| | 26 yrs. | 90 | 5 | 5 | 100 | 20 | 12 |
| | 27–28 yrs. | 85 | 4 | 11 | 100 | 27 | 17 |
| | 29 or older | 91 | 7 | 2 | 100 | 44 | 27 |
| Type of institution last attended | Doctorate-granting | 88% | 7% | 5% | 100% | 120 | 75% |
| | Master's-granting | 79 | 14 | 7 | 100 | 43 | 25 |
| Major subfields | Physics education | 92% | - | 8% | 100% | 12 | 7% |
| | Electron, atomic and molecular | 69 | 31% | - | 100 | 13 | 8 |
| | Optics | 77 | 10 | 13 | 100 | 30 | 18 |
| | Solid state | 88 | 6 | 6 | 100 | 32 | 20 |
| | General physics | 81 | 19 | - | 100 | 21 | 13 |
| Total respondents | N | 140 | 14 | 9 | | 163 | |
| | % | 86 | 8 | 6 | | | 100% |

**Table VIII. Characteristics of 1979–80 physics masters that influence the time required to secure employment.**

| Characteristics | | Time spent finding employment <1 mo. | 1–2 mos. | 3–6 mos. | 7–12 mos. | | Total N | Total % |
|---|---|---|---|---|---|---|---|---|
| Sex | Female | 27% | 46% | 27% | - | 100% | 15 | 10% |
| | Male | 29 | 33 | 34 | 4% | 100 | 139 | 90 |
| Age | 23 or younger | 12% | 50% | 38% | - | 100% | 7 | 4% |
| | 24 yrs. | 15 | 54 | 27 | 4% | 100 | 27 | 18 |
| | 25 yrs. | 29 | 32 | 39 | - | 100 | 31 | 20 |
| | 26 yrs. | 16 | 32 | 42 | 10 | 100 | 19 | 12 |
| | 27–28 yrs. | 31 | 27 | 42 | - | 100 | 27 | 18 |
| | 29 or older | 43 | 27 | 25 | 5 | 100 | 43 | 28 |
| Type of graduate institution | Doctorate-granting | 28% | 32% | 38% | 2% | 100% | 114 | 74% |
| | Master's-granting | 30 | 43 | 23 | 4 | 100 | 40 | 26 |
| Type of employment | Physics related | 31% | 31% | 36% | 2% | 100% | 120 | 78% |
| | Unrelated to physics | 24 | 47 | 23 | 6 | 100 | 34 | 22 |
| Major employer | Industry | 17% | 44% | 36% | 3% | 100% | 88 | 57% |
| | Government | 48 | 18 | 32 | 2 | 100 | 38 | 25 |
| | High school | 28 | 29 | 29 | 14 | 100 | 7 | 5 |
| | College/univ. | 54 | 13 | 33 | - | 100 | 15 | 10 |
| Major work activities | Teaching | 38% | 24% | 33% | 5% | 100% | 21 | 14% |
| | Res & dev. | 32 | 30 | 34 | 4 | 100 | 53 | 34 |
| | Engineering | 22 | 47 | 31 | - | 100 | 46 | 30 |
| | Programming | 19 | 44 | 37 | - | 100 | 17 | 11 |
| Total respondents | N | 44 | 52 | 53 | 5 | | 154 | |
| | % | 29 | 34 | 34 | 3 | | | 100% |

**Table IX. Characteristics of 1979–80 physics bachelors that influence the time required to secure employment.**

| Characteristics | | Time spent finding employment: <1 mo. | 1–2 mos. | 3–6 mos. | 7–12 mos. | | Total N | Total % |
|---|---|---|---|---|---|---|---|---|
| Sex | Female | 34% | 35% | 30% | 1% | 100% | 105 | 15% |
| | Male | 36 | 32 | 29 | 3 | 100 | 614 | 85 |
| Age | 21 or younger | 24% | 48% | 28% | – | 100% | 29 | 4% |
| | 22 yrs. | 34 | 32 | 31 | 3% | 100 | 332 | 46 |
| | 23 yrs. | 40 | 32 | 25 | 3 | 100 | 151 | 21 |
| | 24–25 yrs. | 33 | 38 | 25 | 4 | 100 | 103 | 14 |
| | 26–29 yrs. | 37 | 28 | 35 | – | 100 | 68 | 10 |
| | 30 or older | 45 | 20 | 35 | – | 100 | 36 | 5 |
| Type of bachelor's institution | Doctorate-granting | 32% | 35% | 29% | 4% | 100% | 326 | 45% |
| | Master's-granting | 28 | 27 | 41 | 4 | 100 | 80 | 11 |
| | Bachelor's-granting | 41 | 31 | 27 | 1 | 100 | 313 | 44 |
| Type of employment | Physics related | 31% | 34% | 31% | 4% | 100% | 452 | 63% |
| | Unrelated to physics | 43 | 30 | 26 | 1 | 100 | 267 | 37 |
| Major employer | Industry | 28% | 37% | 32% | 3% | 100% | 463 | 63% |
| | High school | 38 | 43 | 19 | – | 100 | 21 | 3 |
| | University | 32 | 36 | 32 | – | 100 | 29 | 4 |
| | Government | 34 | 28 | 34 | 4 | 100 | 82 | 11 |
| | Military | 84 | 7 | 8 | 1 | 100 | 90 | 13 |
| Major work activity | Computer programming | 33% | 39% | 27% | 1% | 100% | 133 | 18% |
| | Data analysis/quality control | 22 | 33 | 40 | 5 | 100 | 116 | 16 |
| | Res./dev./design | 26 | 35 | 35 | 4 | 100 | 246 | 34 |
| | Teaching | 41 | 31 | 22 | 6 | 100 | 32 | 4 |
| Total respondents | N | 255 | 234 | 210 | 20 | | 719 | |
| | % | 35 | 33 | 29 | 3 | | | 100% |

New bachelors experienced a set of circumstances similar to those experienced by the masters: it takes a little longer to secure a physics related position, than one that is unrelated to physics. But looking at the first characteristic listed in **Table IX**, we find that there is no difference between men and women in the time spent by graduates who are looking for employment. As mentioned earlier it is the type of institution which granted the physics bachelor's degree that appears to make a difference; the highest proportion of graduates with employment lined up at the time of graduation is that from the four-year colleges. When asked for an evaluation, almost 80% of the masters as well as the bachelors found their initial employment challenging.

As the academic year ended in June 1980 an estimated 70 out of 165 astronomy bachelors were interested in immediate employment rather than pursuing a career in astronomy. But to this follow-up survey six months later only 24 graduates contributed their employment information which is summarized in **Table X**. Almost half of that group found astronomy-related work, and reported a higher salary than those graduates who accepted positions whose work was unrelated to astronomy. That was not true in the previous year when salaries for astronomy related work were lower.

**Table X. Employment of 1979–80 astronomy bachelors.**

| Work activity | Type of employer: Industry | Gov't incl. mil. | Coll./ Univ. | High school | N | % | Median monthly salary |
|---|---|---|---|---|---|---|---|
| Astronomy related: | | | | | | | |
| Data analysis | 1 | 1 | 2 | – | 4 | | $1 250.– |
| R & D | 1 | – | 1 | – | 2 | 46% | 11 reporting |
| Technical operator | 1 | – | – | – | 1 | | |
| Teaching | – | – | – | 1 | 1 | | |
| Programming | 2 | 1 | – | – | 3 | | |
| Unrelated to astronomy: | | | | | | | |
| Programming | 2 | 1 | – | – | 3 | | $1 100.– |
| Data analysis | 5 | – | 1 | – | 6 | 54% | 13 reporting |
| Res. & dev. | – | – | 1 | – | 1 | | |
| Flight training | – | 1 | – | – | 1 | | |
| Teaching | – | – | – | 1 | 1 | | |
| Unskilled | 1 | – | – | – | 1 | | |
| Total | 13 | 4 | 5 | 2 | 24 | 100% | |